

### REMARKS

Upon entry of the instant Response and Amendment, Claims 1-16, 18-31, 33 and 34 will remain pending in this application.

In the Office Action mailed June 15, 2006, Claims 1-19 and 33-34 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Pat. No. 6,077,978 issued to McDaniel et al. Claims 20-32 are rejected under 35 U.S.C. §102(b), as being anticipated by, or in the alternative, under 35 U.S.C. §103(a) as being unpatentable over U.S. Pat. No. 6,077,978 issued to McDaniel et al.

#### Rejections under 35 U.S.C. §103(a) as rendered obvious by McDaniel et al.

Claims 1-19 and 33-34 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Pat. No. 6,077,978 issued to McDaniel et al. Claim 17 has been cancelled, thus obviating any grounds for rejection based upon that claim. The Examiner states in paragraph numbered 3, beginning at page 2, that,

Regarding claims 1-19, McDaniel et al. disclose an almost identical process to claim **(1)** (Abstract; column 6, lines 48-58); wherein the starters of claims **(2-4)** are used (column 5, lines 25-39; column 7, lines 7-20); wherein the acids of claims **(5-7)** are used (column 6, lines 3-23); wherein the continuous reactor/conditions of claims **(10-13)** are used (column 7, lines 21-55); wherein the catalyst of claim **(14)** is used (Examples); wherein the alkylene oxide of claims **(15-16)** are used (Examples); wherein the approximate molecular weight range of claim **(17)** is produced (Examples); **(18)** wherein the process is continuous (column 7, lines 21-55); and **(19)** wherein the process is semi-batch (column 7, lines 21-55).

The teachings of McDaniel are deficient in that they fail to explicitly disclose the use of: **(1)** greater than about 100 ppm of acid; **(8)** greater than about 100 ppm to about 2,000 ppm of acid; and **(9)** about 200 ppm to about 300 ppm of acid, all based on the weight of the starter. McDaniel discloses, "*In general*, less than 100 ppm acid based on total low molecular weight starter need to be added," (column 6, lines 55-58).

McDaniel et al. establish that this concentration is a result-effective variable, wherein a minimum is required to prevent de-activation of the DMC catalyst (column 5, lines 3-24). Their general teaching of less than 100 ppm is open to possible ranges above 100 ppm. Furthermore, applicant fails to show criticality for the lower end-points of the claimed ranges.

In light of this, it has been found that, "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation," -*In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955); and, "A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation," - *In re Boesch*, 617 F.2d 272, 205 USPQ 21 5 (CCPA 1980).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the acid concentration in the process of McDaniel et al, because McDaniel et al. establish that this concentration is a result-effective variable, wherein a minimum is required to prevent de-activation of the DMC catalyst. Furthermore, applicant fails to demonstrate criticality for the claimed ranges.

Regarding claims 33 and 34, the teachings of McDaniel et al. are as set forth above and incorporated herein to satisfy the limitations of claims 33 and 34.

Applicant respectfully disagrees with the Examiner's contention regarding McDaniel et al.

As stated in MPEP §2143.01, obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, citing *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992). Clearly there is no such teaching, suggestion or motivation shown in the reference in this case.

As to the Examiner's assertion reproduced above that the acid concentration recited in the instant claims is the optimization of a result-effective variable identified by McDaniel et al., Applicant respectfully directs the Examiner's attention to the paragraph beginning at line 30, page 9 of the instant specification,

It has now been surprisingly discovered that addition of an excess amount of acid, i.e., an amount greater than that needed to merely neutralize the low molecular weight starter's basicity, to the starter prior to its introduction into the reactor as continuously added starter allows use of low molecular weight starter(s) to produce polyols of low

molecular weight (250 Da to 2,500 Da) without catalyst deactivation, without increasing the amount of high molecular weight tail and without appreciably increasing polyol polydispersity.

Thus Applicant respectfully contends that the general conditions of the claims are not disclosed by McDaniel and any citations to the holdings of *Aller* and *Boesch* are inapposite.

As all of the polyols exemplified in McDaniel et al. have a target weight of 3,000 Da or more, Applicant contends that nowhere do McDaniel et al. teach or suggest the production of the low molecular weight polyols instantly recited. Further, irrespective of the Examiner's unsubstantiated conjecture regarding the possibilities of ranges above 100 ppm, the cited art upon which the rejection is supposedly based, i.e., McDaniel et al., provides neither teaching nor suggestion regarding the effect of adding additional acid over that needed for neutralization of the residual basicity. At best, McDaniel et al. provide an invitation to experiment, which the Examiner is aware is an impermissible rationale for a rejection under 35 U.S.C. §103(a).

Therefore, Applicant contends that nothing in the teaching of McDaniel et al. would lead one of ordinary skill in the art to the instantly claimed invention and respectfully requests the Examiner reconsider and reverse his rejection of Claims 1-16, 18, 19 and 33-34 under 35 U.S.C. §103(a) as being unpatentable over U.S. Pat. No. 6,077,978 issued to McDaniel et al.

Rejections under 35 U.S.C. §§102(b)/103(a) as anticipated by, or in the alternative, rendered obvious by McDaniel et al.

Claims 20-32 stand rejected under 35 U.S.C. §102(b), as being anticipated by, or in the alternative, under 35 U.S.C. §103(a) as being unpatentable over U.S. Pat. No. 6,077,978 issued to McDaniel et al. Claim 32 has been cancelled, thus obviating any grounds for rejection based upon that claim. The Examiner states at page 4, paragraph numbered 5 of the instant Office Action that,

Regarding claims 20-32, the teachings of McDaniel et al. are as set forth above and incorporated herein. It should be noted that claims 20-32 are product-by-process claims. It has been found that "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself.

The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process," - *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

In light of this, the product of McDaniel et al. appears to be the same as the product set forth in the instant claims, so long as enough acid is supplied to prevent catalyst deactivation, and the product is produced without increasing the amount of high molecular weight tail or increasing polydispersity (*see column 5, lines 3-9*).

Applicant disagrees with the Examiner's contention regarding McDaniel et al. and respectfully reminds the Examiner that as stated in MPEP §2131, to anticipate a claim, a reference must teach every element of that claim. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ...claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). Applicant respectfully contends that the Examiner has failed to point to where McDaniel et al. do so. As should be apparent from the discussion above, the product of McDaniel is not the product of the instant claims.

Applicant respectfully reminds the Examiner of the Federal Circuit's admonition given against hindsight reconstruction in *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1458-9 (Fed. Cir. 1998) that, "...the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed." Applicant respectfully contends that the Examiner has failed to do so in the instant Office Action. Applicant's comments with respect to the deficiencies of McDaniel et al. are stated above and will not be repeated in the interests of saving time. McDaniel et al. neither teach nor suggest the instantly claimed invention.

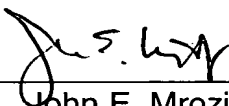
Therefore, Applicant respectfully requests the Examiner reconsider and reverse his rejection of Claims 20-31 under 35 U.S.C. §102(b), as being anticipated by, or in the alternative under 35 U.S.C. §103(a) as being unpatentable over U.S. Pat. No. 6,077,978 issued to McDaniel et al.

### **CONCLUSION**

Applicant has amended Claims 1, 20 and 33; and cancelled Claims 17 and 32. Such claim amendments add no new matter and find support in the specification.

Applicant submits that the instant application is in condition for allowance. Accordingly, reconsideration and a Notice of Allowance are respectfully requested for Claims 1-16, 18-31, 33 and 34. If the Examiner is of the opinion that the instant application is in condition for other than allowance, he is invited to contact the Applicant's Attorney at the telephone number listed below, so that additional changes to the claims may be discussed.

Respectfully submitted,

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